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10/776,456	02/11/2004	Shihong Lao	15115/104001	3574
7590 Jonathan P. Osha OSHA & MAY L.L.P. Suite 2800 1221 McKinney Street Houston, TX 77010			EXAMINER KRASNIC, BERNARD	
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SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/776,456	<b>Applicant(s)</b> LAO, SHIHONG	
	<b>Examiner</b> Bernard Krasnic	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____  |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :7-12-2004, 12-05-2005, 05-01-2006, and 03-02-2007.

## DETAILED ACTION

### *Specification*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because of the inclusion of the reference numbers. It is suggested to remove "4" in line 5, "2" in line 6, etc.

Correction is required. See MPEP § 608.01(b).

3. The disclosure is objected to because of the following informalities:

Page 1, line 4: The -- CROSS REFERENCE TO RELATED ART -- Section must be included above the "BACKGROUND OF THE INVENTION" with the appropriate related applications, which for this application is -- JAPAN 033485/2003 02/12/2003 --.

Appropriate correction is required.

***Claim Objections***

4. Claims 1-7, 10-14, 17-19, and 22-27 are objected to because of the following informalities:

Claim 1, lines 10-11, claim 17, line 7, claims 22 and 25, line 9, claims 24 and 27, line 7 respectively: "determining the contents of correction process" should be -- determining contents of a correction process --.

Claims 1, 22 and 25, line 6 respectively: "inferring the attributes" should be -- inferring attributes --.

Claim 2, lines 4-5: "at least selected one" should be -- at least one --.

Claims 3 and 11, line 5 respectively: "the rectify operation" should be -- a rectify operation --.

Claims 4 and 12, lines 4-5 respectively: "the operation to rectifying" should be -- an operation to rectifying --.

Claims 5 and 13, line 4 respectively: "executing the recorection" should be -- executing a recorection --.

Claims 5 and 13, line 5 respectively: "based on the rectified" should be -- based on a rectified --.

Claims 5 and 13, line 6 respectively: "the operation of rectifying" should be -- an operation of rectifying --.

Claims 5 and 13, line 9 respectively: "the particular time" should be -- a particular time--.

Claims 6 and 18, line 3 respectively: "memory the registered" should be -- memory a registered --.

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Claims 6 and 18, line 11 respectively: "the search process" should be -- a search process --.

Claims 7, 14, and 19, lines 4-5 respectively: "with the information indicating the position" should be -- with information indicating a position --.

Claim 10, line 9, claims 23 and 26, lines 9-10 respectively: "the information required" should be -- information required --.

Claim 10, line 10: "the identification information" should be -- an identification information --.

Claims 17, 24, and 27, lines 6-7 respectively: "the information indicating" should be -- information indicating --.

Claims 17, 24, and 27, line 7: "contents of correction" should be -- contents of a correction --.

Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

5. Claims 25-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 25-27 are drawn to functional descriptive material NOT claimed as residing on a computer readable medium. MPEP 2106.IV.B.1(a) (Functional Descriptive Material) states:

"Data structures not claimed as embodied in a computer-readable medium are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer."

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"Such claimed data structures do not define any structural or functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized."

Claims 25-27, while defining a "program for a computer to execute" in line 1, does not define a "computer-readable medium" and is thus non-statutory for that reasons. A "program for a computer to execute" can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" in order to make the claim statutory. "A program for a computer to execute" should be -- A computer readable medium encoded with computer readable instructions to execute --.

"In contrast, a claimed computer-readable medium encoded with the data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory." - MPEP 2106.IV.B.1(a)

### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-23, and 25-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Re Claims 1, 10, 22, and 25, line 7, claims 23 and 26, lines 8-9 respectively: The limitation "based on the feature amounts" lacks clear antecedent basis. It is suggested to be -- based on feature amounts --.

Re Claims 6 and 18, lines 9-10 respectively: The limitation "the operation of designating predetermined registered information" lacks clear antecedent basis. It is suggested to be -- the operation of designating registered information --.

Re Claims 8, 15 and 20, line 4 respectively: The limitation "the image after correction" lacks clear antecedent basis. It is suggested to be -- the corrected image after correction --.

Re Claims 9, 16, and 21, lines 6-10 respectively: The limitations "is selected one" in line 6, and "to selected one" in line 9 render this claim indefinite because it is unclear what the applicant is trying to state. The Examiner believes and has interpreted the claim as reading and stating that either a "printing of a corrected image" or a "transmitting through the computer network of the corrected image" must be accommodated and either a "transmitter" or a "destination designated by the transmitter" must be accommodated. The paragraph in lines 6-10 is suggested to be rephrased for a clearer understanding to be met.

Claims 2-5 and 7 are dependent upon claim 1.



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Claims 11-14 are dependent upon claim 10.

Claim 19 is dependent upon claim 17.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-5, 7, 22, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Center (US 2002/0113862 A1).

Re Claim 1: Center discloses an image editing apparatus / video conferencing system (see paragraph [0002], [0027], [0018], abstract) comprising an image input part / camera or CPU for inputting an image picked up of a person / face of a person (see Fig. 1, paragraphs [0018], [0003], and [0027], the computer is connected to the camera and they interact in real time since this is video conferencing); a face image detection part / locate face for detecting a face image of an object / person contained in the input image (see Fig. 1, paragraphs [0018], [0003]-[0004], and [0027]); an inference part / evaluate image quality for inferring the attributes / information or characteristics of the face image based on the feature amounts / color or motion analysis in an image area containing the face image detected by the face image detection part (see Fig. 1, paragraphs [0020],

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[0025], [0004]); a determining part / evaluate image quality for determining the contents of correction process / information used for adjusting the color balance of the face image based on the result of inference / evaluated information or characteristics of the face by the inference part (see Fig. 1, paragraphs [0020] and [0004]); a face image correction part / evaluate image quality for executing / adjusting the correction process / information used for adjusting the color balance on the face image according to the contents determined by the determining part (see Fig. 1, paragraphs [0020] and [0004]); and an image output part / other participant of desktop video conferencing for outputting an image corrected / adjusted by the face image correction part (see paragraphs [0020] and [0004], paragraph [0054], lines 6-13).

As to claim 22, the claim is the corresponding method claim to claim 1 respectively. The discussions are addressed with regard to claim 1.

As to claim 25, the claim is the corresponding program claim to claim 1 respectively. The discussions are addressed with regard to claim 1.

Re Claim 2: Center further discloses the inference part / evaluate image quality includes a part for executing the process of inferring / evaluation at least selected one of the race, age and sex as the attributes / range of appearance (see Fig. 1, [0028], lines 4-9, [0048], the evaluation includes any combination of the template matching, motion detection, background differencing, and color analysis, in this case the template matching searches for a face using templates that represent the range of appearance of

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the different types of faces which are known as eigenfaces and these eigenfaces typically use race and sex).

Re Claim 3: Center further discloses the face image detection part / locate face includes a part for rectifying / correcting by adjustment or calculation the result of detection of the face image in response to the rectify operation for the result of detection of the face image (see paragraphs [0018]-[0019], the location and relative size of the face image is detected and using this information, the image is cropped to a portrait size and then resized and therefore most of the background is eliminated by having the detected face image actually only consist of the face image).

Re Claim 4: Center further discloses the inference part / evaluate image quality includes a part for rectifying / correcting by adjustment or calculation the inference result / information or characteristics of the face image in response to the operation of rectifying the inference result (see paragraphs [0020], [0025], [0004], [0028], [0048], the evaluating image quality includes an evaluation of the attributes or range of appearance and adjusts these attributes or range of appearance by color balancing).

Re Claim 5: Center further discloses the face image correction part / evaluate image quality includes a part for executing / adjusting the recorection / camera brightness and contrast of the face image after the correction process / color balancing based on the rectified contents / corrected by adjustment or calculation in response to the operation

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of rectifying the contents of the correction (see paragraphs [0020] and [0004], a correction process by adjusting the color balancing is done and then an adjustment to the brightness and contrast is also done which is basically a recorection), and wherein the image output part outputs the latest corrected image / color balanced, brightness adjustment and contrast adjustment at the particular time point in response to the finalize operation (see paragraphs [0020] and [0004], paragraph [0054], after color balancing and then after brightness adjustment and contrast adjustment, the final image is outputted and directed to the other participant of desktop video conferencing).

Re Claim 7: Center further discloses the face image detection part / locate face detects, upon receipt of an image linked with the information indicating the position / location of the face image of an object from the image input part, the face image based on the link information (see paragraph [0048], carrying information gives the relative position of the face for the next frame image which will be analyzed, therefore when an image is analyzed it has position information for support in detection).

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Center. The teachings of Center have been discussed above.

Re Claim 8: Center further discloses the image output part / camera or CPU includes a part for printing the image after correction.

Although Center fails to disclose or fairly suggest that the output containing the corrected image could be printed, it would be obvious to one of ordinary skill in the art at the time the invention was made to have such a feature because any computer (Center does teach a computer) has the capability to print an output image when connected to a printer (see US 2002/0015514 A1, Fig. 4, ref. No. 16, the printer may print out the corrected face detection image).

Re claim 9: Center further discloses the image input part / camera or CPU includes a part for receiving the image to be processed, transmitted through a computer network / USB (see paragraph [0027], the camera takes the image and transmits the image using the USB connector to a CPU which is part of a computer network), and wherein the image output part / other participant of desktop video conferencing is selected one of a part for printing a corrected image and a part for transmitting, through the computer network / across a network for video conferencing (see paragraph [0054], a transmission is made for video conferencing which typically is set up through a computer network such as wireless network or a basic in-work LAN network), the corrected image to selected one of a transmitter / through network of the image and a

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destination designated by the transmitter / other participant of desktop video conferencing.

Although Center fails to disclose or fairly suggest that the output containing the corrected image could be printed, it would be obvious to one of ordinary skill in the art at the time the invention was made to have such a feature because any computer (Center does teach a computer) has the capability to print an output image when connected to a printer (see US 2002/0015514 A1, Fig. 4, ref. No. 16, the printer may print out the corrected face detection image).

12. Claims 6, 10-21, 23-24, and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Center, in view of Kinjo (US 2002/0015514 A1). The teachings of Center have been discussed above.

Re Claim 6: Center further comprising a registration processing part / recognition of user or users for registering in a memory / RAM of computer the registered information / template of user or users on the feature amounts / color or motion analysis for the range of appearance of the face image detected by the face image detection part / locate face in correspondence with the contents of correction process executed by the face image correction part, wherein the face image detection part / locate face is set to detect, in accordance with the operation of designating predetermined registered information / recognize a particular user or users, a face image from the input image by the search process / search for a face or faces sought using the feature amounts / color and motion

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analysis for range of appearance contained in the designated registered information / template of user or users (see paragraph [0028], lines 7-16, a template or multiple templates of the detected user or users are pre-stored and with the information derived using these templates a search for a face or faces represented by the range of appearance of the different face or faces may be sought), and wherein the face image correction part / evaluate image quality, upon detection of the face image by the search process / search for a face or faces sought, executes the correction process on the detected face image according to the contents of correction process contained in the designated registered information.

However, Center fails to disclose or fairly suggest respectively that the correction process performs the correction using the designated registered correction process information.

Kinjo discloses the correction part executes the correction process on the detected face image according to the contents of correction process contained in the designated registered information / predetermined image processing conditions for each specific person (see paragraph [0023], abstract, after predetermined image processing conditions for each specific person in advance along with the face detection is done, the correction process selects image processing correcting conditions corresponding to the specific identified face or faces and applies the correction processing).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Centers apparatus using Kinjo's teachings by including the ability to tap into the registered information and select the appropriate

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correction processing information in order to attain good adjustment results which have natural feeling adjustment for the specific face or faces of people (see Kinjo, paragraphs [0017], [0020], and [0023]).

Re Claim 10: Center discloses an image editing apparatus / video conferencing system (see paragraph [0002], [0027], [0018]) comprising an image input part / camera or CPU for inputting an image picked up of a person / face of a person (see Fig. 1, paragraphs [0018], [0003], and [0027], the computer is connected to the camera and they interact in real time since this is video conferencing); a face image detection part / locate face for detecting a face image of an object / person contained in the input image (see Fig. 1, paragraphs [0018], [0003]-[0004], and [0027]); a registration part / evaluate image quality for holding the registered information / template of user or users including the feature amounts / color or motion analysis for range of appearance of the face image of each of a predetermined number of objects / face templates of user or users and the information required for correcting the face image in correspondence with the identification information unique to the object / user or users (see paragraph [0028], lines 7-16, a template or multiple templates of the detected user or users are pre-stored and with the information derived using these templates a search for a face or faces represented by the range of appearance of the different face or faces may be sought); an inference part / evaluate image quality for estimating / evaluating the object / user or users by comparing the feature amounts / color or motion analysis for range of appearance of the face image detected by the face image detection part / locate face



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with the information registered / template of user or users in the registration part (see paragraphs [0020] and [0004]); a face image correction part / evaluate image quality for executing the process of correcting / adjusting the color balancing the detected face image using the registered information of the object estimated by the inference part (see paragraphs [0020] and [0004]); and an image output part / other participant of desktop video conferencing for outputting the image corrected / adjusted by the face image correction part (see paragraphs [0020] and [0004], paragraph [0054], lines 6-13).

However, Center fails to disclose or fairly suggest respectively that the correction process performs the correction using the designated registered correction process information.

Kinjo discloses the correction part executes the correction process on the detected face image according to the contents of correction process contained in the designated registered information / predetermined image processing conditions for each specific person (see paragraph [0023], abstract, after predetermined image processing conditions for each specific person in advance along with the face detection is done, the correction process selects image processing correcting conditions corresponding to the specific identified face or faces and applies the correction processing).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Centers apparatus using Kinjo's teachings by including the ability to tap into the registered information and select the appropriate correction processing information in order to attain good adjustment results which have

natural feeling adjustment for the specific face or faces of people (see Kinjo, paragraphs [0017], [0020], and [0023]).

As to claim 23, the claim is the corresponding method claim to claim 10 respectively. The discussions are addressed with regard to claim 10.

As to claim 26, the claim is the corresponding program claim to claim 10 respectively. The discussions are addressed with regard to claim 10.

As to claim 17, the discussions are addressed with respect to claim 10. As claim 17, claim 10 accomplishes the image input, face image detection, an information input indicating the correction contents (input holding information concerning correction content is inputted into the registration part of claim 10), a face image correction using the inputted information, and outputting the corrected image.

As to claim 24, the claim is the corresponding method claim to claim 17 respectively. The discussions are addressed with regard to claim 17.

As to claim 27, the claim is the corresponding program claim to claim 17 respectively. The discussions are addressed with regard to claim 17.

As to claims 11-16, the discussions are addressed with respect to claims 3-5 and 7-9.

As to claims 18-21, the discussions are addressed with respect to claims 6-9.

***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cohen-Sola et al discloses a conferencing system and method for automatic determination of preset positions corresponding to participants in video-mediated communications; Toyama et al discloses a system and method for automatically adjusting gaze and head orientation for video conferencing; Kinjo discloses an image processing method; Steinberg et al discloses a digital image processing using face detection information; Beek et al discloses a face imaging system for recordal and automated identity confirmation; Sugimoto discloses an image characteristic portion extraction method; Imagawa et al discloses a face detection device; Okano et al discloses a system for identifying individuals; Owada discloses an image pickup device and automatic focus detection method, Yamaguchi discloses an identification photo system and image processing method.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-1357. The examiner can normally be reached on Mon-Thur 9:00am-3:00pm and every other Friday 9:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bernard Krasnic  
April 11, 2007



JINGGE WU  
SUPERVISORY PATENT EXAMINER